Experimental Model Spread/Spectrum Webpage
Product Description Document (PDD)

Part 1 – Mission Connection

1. Product Description:
This experimental web page originally developed for use at WFO Portland, OR (PQR) to display Model Spread/Spectrum (a "box and whisker" plot time series of statistical data that summarizes output from multiple numerical weather models in addition to the NWS forecast.) This web page has been modified to display the Model Spread/Spectrum for all NWS WFOs.

2. Purpose/Intended Use:
This experimental web page shows the spread of the models (a good indicator of the possible outcomes). This service is meant to provide users with the range of possibilities that exist in a forecast, not simply a single number that may be right or wrong. Users can use this web page to make a more informed decision based on the data presented, with the option to choose the NWS forecast if they feel uncomfortable with their interpretation of the data.

3. Audience:
The primary audience for this service includes decision makers such as emergency managers, hydrological managers, etc. However, it is anticipated that a wide variety of users will find this page useful including gardeners, building contractors, farmers and others.

4. Presentation:
A webpage, that displays an interactive time series of box and whisker plots. Users have the option to change the specific location, weather forecast element, apply a bias correction, and show the data points. A "Help" section describing how to read and interpret the plots is easily access from the main page.

Webpage: **http://www.preview.weather.gov/edd** - The Model Spread Quick Layer

5. Feedback Method:
Please use the following link to complete a short survey:
http://www.nws.noaa.gov/survey/nws-survey.php?code=NPQRMS

The feedback period extend through July 30th, 2014. At that time the NWS will evaluate feedback to determine whether to transition the Model Spread/Spectrum to operational status as a national product, discontinue it or review and extend the experimental feedback period.

Part 2 – Technical

1. Format and Science Basis:
Synergy between Javascript plotting library (flot) and basic statistics coalesce to form a robust, simple, display of forecasts for the following fields: Maximum Temperature, Minimum Temperature, Maximum Relative Humidity, Minimum Relative Humidity, Probability of Precipitation, Quantitative Precipitation Forecast, Wind Speed, and Freezing Level for multiple weather forecast sites in the Portland CWA. The model spectrum is comprised of 12 (or as many as we would like to have) different short and long term numerical weather models. The experimental page does not show model output, but rather model output spread. An AWIPS GFE procedure is run at WFO's to

ascertain values from each of these models for the defined sites. Statistics are calculated for each of the model spreads for each field and site and then saved to a file. The resultant files are scp'd to LDAD and then rsync'd to gridiron2 (apps-data) directory. The webpage is built on jQuery, using AJAX calls to retrieve the data files and plot them using the flot plotting library.

2. Availability:
This service should be available 24 hours a day and 7 days a week. Data for the page is updated hourly.

Example